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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Friedrich Ackermann

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EXAMINER

RUTKOWSKI, JEFFREY M

ART UNIT

PAPER NUMBER

2416

NOTIFICATION DATE

DELIVERY MODE

05/13/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/527,138	Applicant(s) ACKERMANN ET AL.	
	Examiner JEFFREY M. RUTKOWSKI	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-16 have been cancelled.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/20/2009 has been entered.

Priority

Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in Germany on 09/14/2002.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 17-31** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. For **claims 17-24**, the word "data" renders the claim indefinite because the claims are ambiguous as to which type of data is stored and used to calculate the topology. The Examiner has interpreted the word "data" to refer to module identification information [0029].

5. Also, the feature a) in **claim 17** renders the claims indefinite because the feature suggests the modules store data in a central unit memory. The Examiner has interpreted feature a) to

Art Unit: 2416

mean each module stores module identification information (data) and is contacted by a central unit.

6. For **claims 25-31**, it is unclear what is meant by the phrase a "...comparison of the data that were registered..." The Examiner has interpreted the word "data" to refer to module identification information [0029] because it seems the modules are being registered before and after the interruption.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. **Claims 25 and 28-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dorfe et al. (US Pat 5,204,669), hereinafter referred to as Dorfe, in view of Schoeberl et al. (US Pg Pub 2004/0090925), hereinafter referred to as Schoeberl.

10. For **claim 25**, Dorfe teaches at least one peripheral communicates with a programmable controller unit (central unit) to receive an address assignment via daisy chained control lines **18**

Art Unit: 2416

[col. 5 lines 15-20, 50-60 and figure 1] (a central unit which is contacted with several modules, wherein at least two of the modules are connected in series and the modules each comprise a memory to store data). The control signals are transmitted over the control lines when an address needs to be assigned to a function module 16 [col. 6 lines 15-25] (a switch which can be controlled by a computer unit in such a manner that the contact of a module to the central unit can be interrupted and restored again, wherein the computer unit comprises). The programmable controller unit 12 comprises a programmable controller (control unit to control the switch) [figure 2]. The controller uses information transported from the last function module to determine the address and the number of connected function modules [col. 7 lines 30-34] (a memory to register the data of the modules).

11. Dorfe does not teach the calculation of topology information. Schoeberl discloses an architecture where after a network reset, which includes the addition or removal of nodes (interruption of a contact) [0050], a current topology (data registered after the interruption of a contact) is compared to a reference topology (data registered before the interruption of a contact) [0055]. The comparison is used to determine which nodes were added or removed from the network [0057]. Since both Dorfe, in figure 1, and the IEEE-1394 standard support serial bus connections [Schoeberl, 0003], it would have been obvious to a person of ordinary skill in the art at the time of the invention to use Schoeberl's architecture in Dorfe's invention to allow Dorfe's architecture to support an IEEE-1394 architecture.

12. For claim 28, which depends from claim 25, Dorfe does not teach the use of type names. Schoeberl discloses a self-ID packet that includes a network-node number (wherein the data comprise a type name to identify a module) [0014]. It would have been obvious to a person of

Art Unit: 2416

ordinary skill in the art at the time of the invention to use type names in Dorfe's invention to allow the network to be managed [**Schoeberl, 0014**].

13. For **claims 29 and 31**, Dorfe teaches the program controller unit and the function modules are connected via lines [**figure 1**] (wherein the contact between a module and the central unit is via a line).

14. For **claim 30**, Dorfe teaches the programmable modules and the programmable controller are electrically interconnected [**col. 5 lines 32-35**] (wherein the modules are supplied with power from the central unit via a line).

15. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Dorfe in view of Schoeberl as applied to **claim 25** above, and further in view of Koelzir (US Pg Pub 2004/0012249).

16. For **claim 26**, which depends from **claim 25**, the combination of Dorfe and Schoeberl do not disclose the use of a Controller Area Network (CAN). Koelzir discloses a Controller Area Network (CAN) arranged in a star topology [**0069**] (further comprising a CAN-bus). It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a CAN bus in Dorfe's invention to allow for arbitration free transmission between nodes.

17. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Dorfe in view of Schoeberl as applied to **claim 25** above, and further in view of Kodosky (US Pat 7,062,718).

18. For **claim 27**, which depends from **claim 25**, the combination of Dorfe and Schoeberl do not disclose the use of Transmission Control Protocol over Internet Protocol (TCP/IP). Kodosky discloses TCP/IP is used between two devices to transfer information [**col. 38 lines 60-65**] (wherein a TCP/IP is used as the protocol). It would have been obvious to a person of ordinary

Art Unit: 2416

skill in the art at the time of the invention to use TCP/IP as a communication protocol in Dorfe's invention to make use of a well-known standardized communication protocol.

Response to Arguments

As a note to the Applicant, it appears the computer unit is not required by **claims 25-31** because the switch "can be" but does not have to be controlled by the computer unit. To expedite prosecution, the Examiner has interpreted the claims as requiring the computer unit. In other words, the Examiner has interpreted the phrase "...a switch which can be controlled by a computer unit..." to mean "a switch which is controlled by a computer unit..."

Applicant's arguments with respect to **claims 25-31** have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

19. **Claims 17-24** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

20. The cited prior art of record does not teach or suggest the repeated interruption and restoration of contacts with other modules to calculate the topology of modules in a system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2416

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey M Rutkowski
Patent Examiner
04/30/2009

/KWANG B. YAO/
Supervisory Patent Examiner, Art Unit 2416